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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,762	12/29/2000	Sailesh Kottapalli	2207/10121	5066

7590 12/21/2005
Kenyon & Kenyon
Suite 600
333 W. San Carlos Street
San Jose, CA 95110-2711

EXAMINER

PAN, DANIEL H

ART UNIT PAPER NUMBER

2183

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/751,762		KOTTAPALLI ET AL.	
	Examiner		Art Unit	
	Daniel Pan		2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>herein</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

1. Claims 1-21 remain for examination.
2. In view of the Appel Brief filed on 10/05/05, PROSECUTION IS HEREBY REOPENED. New ground of rejection are , and threfore non-final action, set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

3. A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

(see last page).

4. Upon further review and consideration in the Appeal Brief, it is found that although the prior art of record (see Parady (5,933,627) applied by previous examiner) taught the stalling of the operation (see col.4, lines 59-62), it did not teach the flushing of the instruction on the stalling operation as claimed. Applicant correctly points

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out the prior art did not teach the flushing of instruction of the thread from the pipeline as set forth in the claim. In response to applicant's argument in the Brief, a new prior art has been applied to show the flushing of instruction of thread in a pipeline system (see Eickemeyer (6,694,425). This is a non-final action in order to allow applicant a chance to respond.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by

Eickemeyer (6,694,425).

6. As to claims 1, 5, 10, 16, Eickemeyer taught a pipeline system comprising at

least :

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a) determining if a stalled operation of a first thread is due to a loading of data from a memory device (see the stalled thread indispach stage in col.1, lines 6-12, see also the stall detector in col.6, lines 15-18, col.8, lines 35-38, see load /store instruction in col.3, lines 40-44, see also the reasons for stalling for the loading of data from memory in col.10, lines 35-45); and

b) flushing an instruction from the thread a pipeline of said processing system when data is to be loaded from said memory device before executing the instruction (see the flushing of the instruction of the thread in col.1, lines 6-12, see also the flushing of the instruction in the pipeline in col.6, lines 18-26, col.11, lines 41-49).

7. As to claim 5, Eikemeyer also taught the a predetermined cycles before execution (see col.13, lines 5-15, see also the delay cycles before restarting the instruction in col.5, lines 26-30).

8. As to claims 2, 6, Eikemeyer also taught a system memory (see system memory in col.8, lines 55-66).

9. As to claims 3, 7, 11, 17, Eikemeyer also taught cache miss (see cache miss in col.3, lines 40-44, col.13, lines 5-8). No explicitly explicitly teaching of cache missing marking has been shown, but Eikemeyer taught cache miss as reason for stalling (see col.3, lines 40-44), therefore, it must have cache miss marking, otherwise, it would not have known which instruction was stalling.

10. As to claims 4,8, Eikemeyer also taught rescheduling of instruction (see the refetch and reenter of the flushed instruction in col.12, lines 58-67, col.13, lines 1-15, see also the delay cycles before restarting the instruction in col.5, lines 26-30).

11. As to claim 9, see the delay cycles before restarting the instruction in col.5 lines 26-30, see the reenter into the normal pipeline in col.12, lines 58-67, col.13, lines 1-15, see, see also the execution after the dispatch in col.10, lines 20-26).

12. As to claims 12,13,18, 19, see the exception in col.3, lines 26-35, 36-44, col.10, lines 35-42 for reasons for stalling. See also the determination of the older instructions in col.12, lines 42-63. No explicitly explicitly teaching of cache miss marking has been shown, but Eikemeyer taught cache miss as reason for stalling (see col.3, lines 40-44), therefore, it must have cache miss marking, otherwise, it would not have known which instruction was stalling.

13. As to claims 15,21, see the data available in col.3, lines 40-44. See also the reentering to normal pipeline in col.13, lines 1-15.

14. As to claim 20, see fetch unit 270 in fig.2A.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Panwar et al. (5,890,008) is cited for the known teaching of the flushing of instructions on exception and the retirement of the instructions (see col.13, lines 36-67).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan

DANIEL H. PAN
PRIMARY EXAMINER
SEP 2006
[Signature]

[Signature]
EDDIE CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100